## PX 620

Controlling costs as we scale ODL is essential to healthy growth, so in order to track the costs that Ripple pays for the exchange liquidity that ODL requires, we developed the **Average Cost of Liquidity** metric. As the Natural Liquidity Working Group discussed possible measurables, it was concluded that an inclusive measurement of costs would be better to track progress not only in building natural liquidity - the liquidity made available through market participants other than our contracted, paid market making partners - but also the progress in developing partnerships that are able to scale and provide liquidity at lower cost.

As the metric's name suggests, it captures all costs related to liquidity for every dollar sent via ODL. For ODL to become self-sustaining, we need to see this cost fall as the product matures. Since we will still be opening new corridors in illiquid markets in the near term, we'd like to be able to use this work to develop a playbook on how to reduce costs over time. In this data drop, we'll look at how this cost has changed over time - on aggregate, by corridor, and by customer.

## The cost metric includes:

Message

Subject:

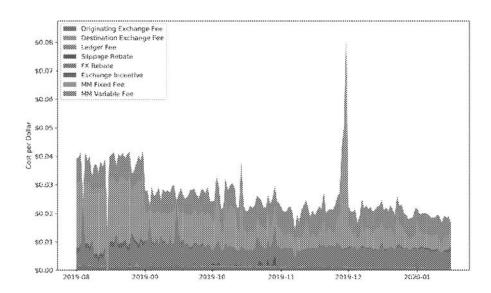
- Transaction fees, which include the originating and destination exchanges' fees and the XRP Ledger fee
- Incentives to customers and exchange partners, which include rebates to cover slippage (when the quoted price and executed price differ) and FX difference (when the ODL rate and spot rate differ) for customers, as well as volume incentives for exchanges
- Incentives to market makers, which include fixed fees as well as variable fees based on the ODL volume they are a counterparty for

We knowingly omit some costs that are not explicitly related to liquidity, such as customer volume incentives, which are more related to cost of sales, as well as our loans to market makers, which leverage our balance sheet but are less easily quantified as a cost.

Average liquidity cost per dollar volume, all ODL volume, 8/1/19 to date

Data Drop - Average Cost of Liquidity

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Since Moneygram went live with ODL, the average liquidity cost has been \$0.023 for every \$1 sent, the largest components being market maker fees and FX rebates. Per-dollar cost has decreased over time, primarily because as volumes have ramped, market maker fixed fees have been spread across more dollars of volume, resulting in the average contribution of fixed MM fees falling from over \$0.020 in August 2019 to under \$0.005 in January 2020. Outside of fixed fees, market maker variable fees and FX rebates have decreased as well, though to a lesser extent, from \$0.014 in August 2019 to \$0.012 in January 2020 as volume in the entirely natural EUR/USD corridor has become a larger share of the total.

The spike in cost on November 30 was due to a temporary decrease in Moneygram's USD/MXN volume while they simultaneously started up flows from USD to PHP, a relatively more expensive corridor, bringing us to...

## Cost by corridor

These are our largest ODL corridors, ordered from lowest to highest cost:

Corridor	Total Volume (USD)	Average Liquidity Cost per Dollar Volume
EUR/USD	\$25M	\$0.007
USD/MXN	\$220M	\$0.021
USD/PHP	\$19M	\$0.043
AUD/USD	\$9M	\$0.050
AUD/PHP	\$4M	\$0.078

All numbers are from 8/1/19 to date.

EUR/USD, our only "natural" corridor, is also our cheapest corridor as we have no fixed or variable market maker costs. The largest cost component in that corridor is FX rebates, which are still smaller per dollar than most other corridors - 0.58% compared to 0.65% in USD/MXN, for example.

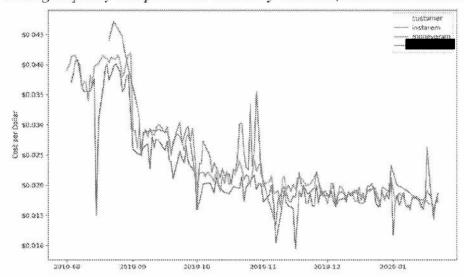
AUD and PHP are our more expensive corridors. We expect that costs will lower as volumes ramp and fixed fees are spread across more dollars of volume as they have in the USD/MXN corridor. As an example, from August to December 2019, costs in the USD/MXN corridor were halved from \$0.040 to \$0.019 as monthly volumes increased from \$8M to \$72M. That said, with AUD/PHP, as we currently require market makers on both the originating and destination exchange, it should remain higher than other corridors for the near future.

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## Cost by customer type

The USD/MXN corridor has been around for some time and has had a mix of customers with different payment patterns, making it a good corridor for us to understand how costs differ across use cases. The chart below shows how costs have changed over time for Instarem, a remittance use case with low-value payments, compared to Moneygram and both treasury use cases with higher-value payments.

Average liquidity cost per dollar volume by customer, USD/MXN corridor, 8/1/19 to date



Though there are some fluctuations, costs are largely in line with one another for different kinds of customers.

Going forward, we will use this metric to measure progress toward our natural liquidity goals - with an initial, conservative goal of a reduction in cost for the USD/MXN corridor by over 5% by the end of Q1.

on behalf of the XRP Markets and Data Teams

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